BONNEVILLE POWER ADMINISTRATION

Ground Water Quality and Riparian Enhancement Projects in Sherman County, Oregon

Coordination and Technical Assistance

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Ground Water Quality and Riparian Enhancement Projects in Sherman County, Oregon

Coordination and Technical Assistance

Originally titled: ***Providing Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon***

BPA Project No. 2002-015-00
Contract No. 00009956

Annual Report

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by

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ABSTRACT

This project was designed to provide technical assistance and project coordination to producers in Sherman County for on the ground water quality and riparian enhancement projects. This is accomplished utilizing the USDA Conservation Reserve Enhancement Program (CREP) in addition to other grant monies to translate the personnel funds in this project to on the ground projects. Two technicians and one watershed council coordinator are funded, either wholly or in part, by funds from this grant.

The project area encompasses the whole of Sherman County which is bordered almost entirely by streams providing habitat or migration corridors for endangered fish species including steelhead and Chinook salmon. Of those four streams that comprise Sherman County's boundaries, three are listed on the DEQ 303(d) list of water quality limited streams for exceeding summer temperature limits. Only one stream in the interior of Sherman County is 303(d) listed for temperatures, but is the largest watershed in the County. Temperatures in streams are directly affected by the amount of solar radiation allowed to reach the surface of the water. Practices designed to improve bank-side vegetation, such as the CREP program, will counteract the solar heating of those water quality listed streams, benefiting endangered stocks.

CREP and water quality projects are promoted and coordinated with local landowners through locally-led watershed councils. Funding from BPA provides a portion of the salary for a watershed council coordinator who acts to disseminate water quality and USDA program information directly to landowners through watershed council activities. The watershed coordinator acts to educate landowners in water quality and riparian management issues and to secure funds for the implementation of on the ground water quality projects.

Actual project implementation is carried out by the two technicians funded by this project. Technicians in Sherman County, in cooperation with the USDA Natural Resources Conservation Service, assist landowners in developing Resource Management Systems (RMS) that address resource concerns in a specified land unit. These RMS plans are developed using a nine step planning process that acts to balance natural resource issues with economic and social needs. Soil, Water, Air, Plants, Animals, and Human resource concerns are the core focus in developing a framework for improving the efficiency and effectiveness of conservation activities in a given planning unit, while working within the guidelines set forth by the National Environmental Policy Act (NEPA), Clean Water Act (CWA), Endangered Species Act (ESA), Magnuson-Stevens Act (MSA), National Historic Preservation Act (NHPA), and other federal, state, and local laws.

Implementation of this project has provided technical and implementation assistance for numerous on the ground projects, including over 50 WASCBs, several thousand feet of terraces, numerous spring developments, fencing, 5 implemented CREP contracts, and the development of 12 additional CREP projects slated for enrollment at

the beginning of FY ’06. Within the past contract year in Sherman County, 355.4 acres of CREP have been enrolled protecting 19.3 miles of riparian habitat. In addition to the increase in on the ground projects, coordination and outreach to solicit conservation projects in Sherman County has increased due to the additional staffing provided by BPA funds. As a result there is an abundance of potential conservation projects for water quality and riparian management improvement.

With the sustained availability of coordination and technical assistance provided through this grant, BPA personnel funds will translate to a much higher dollar figure applied on the ground. This project has been very successful in keeping up with the demand for conservation projects within Sherman County.

INTRODUCTION

Sherman County SWCD partners with locally-led watershed councils to produce an overall change in land management patterns across the private lands between the Lower John Day and Lower Deschutes Rivers for the benefit of improving overall watershed health. The Sherman County Soil and Water Conservation District Business Plan (July 2003) calls for the SWCD to utilize an ecosystem approach to watershed enhancement and protection by (among other actions) helping to establish and support local watershed councils and by encouraging local participation in watershed planning and restoration activities.

This project acts to satisfy a critical need for conservation project coordination and technical assistance in the lower Deschutes and Lower John Day Basins. The staffing support provided through this project addresses a backlog of conservation projects aimed at improving water quality and enhancing riparian corridors. The outcome of these efforts manifests itself in improved overall watershed health. This project also addresses Action Items 153 and 154 of the 2000 FCRPS Biological Opinion through the planning and implementation of water quality and CREP projects in Sherman County.

DESCRIPTION OF PROJECT AND PROJECT AREA

This project, entitled “Providing Coordination and Technical Assistance to Watershed Councils and Individuals in Sherman County, Oregon,” works to provide funding for two technicians and one watershed coordinator for planning, implementing, and monitoring CREP and water quality projects for landowners in Sherman County. All work is done in cooperation with other federal, state, and local agencies to avoid duplication of efforts and to provide the widest possible range of conservation experience, maximizing project efficiency and effectiveness.

Action item 153 of the 2000 FCRPS Biological Opinion states that “BPA shall negotiate and fund long term protection…of riparian buffers…working with agricultural incentive programs such as the Conservation Reserve Enhancement Program (CREP).” This project meets the goal of working with the CREP program to protect and enhance riparian corridors on streams with a history of threatened and endangered fish species

presence. Technicians work under the guidelines set forth in the NRCS Field Office Technical Guide (FOTG) to provide riparian tree planting and grass seeding to filter contaminants and reduce solar radiation impact on streams. Landowners are committed to 10-15 year contracts that lease riparian land adjacent to streams that are subject to an Oregon Department of Agriculture (ODA) Agriculture Water Quality Management Plan. Riparian buffers can range in width from a minimum 35 feet to a maximum 180 feet on one side of an eligible stream, giving the possibility of a 360 foot buffer zone for a stream with both sides enrolled in the program. Landowners are required to plant trees or seed native grasses in addition to excluding livestock from the buffer zone for the length of the CREP contract. This gives the buffer the ability to regain important functionality in filtering contaminants and reducing direct solar radiation of streams.

In addition to receiving a lease payment for land committed to a CREP buffer, landowners receive cost share money and incentive payments to install approved practices within the buffer such as fencing for livestock exclusion, off-stream water developments, tree planting materials and labor, irrigation for tree and shrub establishment, and range seeding, among others. These payments result most often in total cost share for participants. There is no money directly invested into buffers by BPA, as the entire cost share and lease payments are provided through the USDA CREP Program. BPA funds make the promotion and planning of CREP buffers possible in Sherman County through the positions funded by this grant.

This project has also funded planning and technical assistance for the development of thousands of feet of terraces, over 50 Water and Sediment Control Basins (WASCBs), numerous spring developments, and many other projects with the cumulative effect of improving overall watershed health and water quality. Improved watershed health benefits fish and wildlife populations, keeping with the goals of Action item 154 of the 2000 FCRPS Biological Opinion.

This project is consistent with the strategies/objectives set forth in the management plan and prioritization framework outlined in the John Day Subbasin Plan. The upland portion of this project impacts three limiting factors outlined in the John Day Plan on pages 242-244. Flow, Sediment Load, and Temperature are the affected limiting factors. The CREP portion of this project additionally impacts Channel Stability and Habitat Diversity / Key Habitat. The strategies listed on page 245-247 that are effective for improving the five limiting factors described above are Upland Improvements, Riparian Habitat Improvements, and Protecting Existing Habitat. As described in the Upland Improvement Strategy Definitions on page 273-274 of the John Day Plan, definition H1 describes the use of water developments and pasture fencing as tools in livestock grazing management. The description of H6 cites numerous erosion and runoff control practices that have been used in this project as beneficial in improving watershed hydrology and in sedimentation reduction. As described in the Riparian Habitat Improvement Strategy Definitions on page 263-266 of the John Day Plan, definition E1 cites grazing management as important in riparian improvement. The description of E2 and E3 cites vegetation management and flood plain restoration as other keys in riparian improvement. Strategy G listed on pages 270-272 cites that Protecting Existing High

Quality Habitat Areas is important. CREP projects accomplish all three of these riparian functions in addition to protecting existing habitat through use exclusion for up to 15 years per contract.

In addition this project provides technical assistance and coordination in order to implement Upland and Riparian Habitat Improvement projects on 5 watersheds in the John Day Subbasin and 2 watersheds in the Deschutes Subbasin. Page 249 shows the priority rankings by watersheds for the Lower and Middle Mainstem John Day River. Two Watersheds (Pine Hollow and Lower JDR Ferry Canyon) ranked in the upper half for restoration potential. The other three (Grass Valley Canyon, Lower JDR Scott Canyon, and Lower JDR McDonald Ferry) ranked in the bottom half for restoration. Technical assistance and project coordination for CREP and Upland Habitat projects have been provided as a result of this project in all five of the watersheds listed. The highest ranking strategies for Sherman County Watersheds are Protecting Existing Habitat (Number 1 of 10), Riparian Habitat Improvements (Number 4 of 10), and Upland Improvements (Number 6 of 10) as shown on page 249. On Page 248 it is stated that there were six strategies that the coordination team ranked as "very high" or "high" priorities within the 43 HUC5s in the Subbasin. Upland Improvements, Riparian Habitat Improvements, and Protection of Existing Habitat are among those strategies that ranked very-high to high. On page 286 in the prioritization framework, it is stated that projects that benefit local species, are technically sound, and provide socio-economic integration should rank highest for funding. This project addresses components of all three of those criteria.

Sherman County technicians were also involved in the process to develop a biological opinion for threatened and endangered salmonid and steelhead species that allows producers to move forward with their conservation efforts when the timing is best for both the endangered species and cropping cycles. This effort, which has recently been approved by all entities involved, has implications of protecting threatened and endangered species while providing local agricultural producers protection under the Endangered Species Act. The biological opinion is the result of a four-year programmatic consultation between the USDA's Natural Resources Conservation Service (NRCS) and NOAA-Fisheries and US Fish and Wildlife Service, led by local soil and water conservation districts (SWCDs) in Wasco, Sherman, and Gilliam counties. In the past, in order for producers to conserve natural resources and improve streambank habitat in areas covered under the Endangered Species Act, the federal agencies involved were required to go through a lengthy formal consultation on each and every conservation practice. By integrating quality criteria for salmon habitat into NRCS conservation practices approved under the section 7 federal consultation process, farmers who use the approved conservation practices will be able to meet ESA requirements for those activities without having to develop individual habitat conservation plans and seek incidental take permits under section 10 of the Endangered Species Act. This is a major cost and time savings for producers. The new biological opinion provides a blanket consultation for certain conservation practices. This allows producers who own land on or near streams occupied by threatened and endangered species with the opportunity to improve aquatic habitat by planting trees and shrubs, or improving livestock

management. In addition, private land managers with land on hillsides above these same streams who work to reduce soil erosion by wind or water will be provided with the same protections.

Common practices employed by Sherman County producers include the development of sediment control structures that act to reduce sheet, rill, and classic gully erosion in addition to reducing sediment load into streams. Terracing and Water and Sediment Control Basin (WASCBs) systems are designed to trap sediment before it leaves agricultural fields while simultaneously capturing, storing, and safely releasing overland water flows at a much reduced velocity. Another common practice utilized in Sherman County is the Spring Development which provides a viable alternative to using streams for supplying livestock and wildlife with clean water. This practice is invaluable in giving riparian areas the resting periods needed to allow natural vegetation to maintain its health and vigor. Other water quality and wildlife enhancement practices include grazing management plans, range seeding, brush control, and fencing, all of which provide a cumulative improvement in overall watershed health.

CREP and water quality projects are promoted and coordinated with local landowners through locally-led watershed councils. Funding from BPA provides a portion of the salary for a watershed council coordinator who acts to disseminate water quality and USDA program information directly to landowners through watershed council activities, newsletters, and joint Conservation District/Watershed Council website (http://www.sherman.oacd.org). The watershed coordinator acts to educate landowners in water quality and riparian management issues and to secure funds for the implementation of on the ground water quality projects.

The project area encompasses the whole of Sherman County which is bordered almost entirely by streams providing habitat or migration corridors for endangered fish species including steelhead and Chinook salmon. Of those four streams that comprise Sherman County's boundaries, three are listed on the DEQ 303(d) list of water quality limited streams for exceeding summer temperature limits. Only one stream in the interior of Sherman County is 303(d) listed for temperatures, but is the largest watershed in the County. Temperatures in streams are directly affected by the amount of solar radiation allowed to reach the surface of the water. Practices designed to improve bank-side vegetation, such as the CREP program, will counteract the solar heating of those water quality listed streams, benefiting endangered stocks.

Agriculture is the predominant land use in Sherman County with crops consisting mainly of dry-land grain on two year winter grain-summer fallow rotations. Many producers use conventional tillage practices in combination with leaving a percentage of straw residue after harvest in order to conserve moisture and reduce soil losses to wind and water erosion. There are also producers that utilize a no till crop rotation that allows minimum disturbance to the soil while increasing water infiltration, further reducing soil erosion. Other agricultural activities involve rangeland management for grazing and wild life, and enrollment of acres in the Conservation Reserve Program (CRP).

Conservation project planning and implementation is spearheaded in Sherman County by the Soil and Water Conservation District and local watershed councils in partnership with the USDA NRCS. These agencies are committed to improving overall watershed health to maintain beneficial uses of water throughout Sherman County and beyond its borders.

METHODS AND MATERIALS

Technicians in Sherman County, in cooperation with the USDA Natural Resources Conservation Service, assist landowners in developing Resource Management Systems (RMS) that address resource concerns in a specified land unit. These RMS plans are developed using a nine step planning process that acts to balance natural resource issues with economic and social needs. Soil, Water, Air, Plants, Animals, and Human resource concerns are the core focus in developing a framework for improving the efficiency and effectiveness of conservation activities in a given planning unit, while working within the guidelines set forth by the National Environmental Policy Act (NEPA), Clean Water Act (CWA), Endangered Species Act (ESA), Magnuson-Stevens Act (MSA), National Historic Preservation Act (NHPA), and other federal, state, and local laws.

Programs and grant funding for CREP and water quality projects are marketed using several different strategies all with the purpose of providing landowners the information necessary to make informed management decisions. This project has allowed Sherman County the technical expertise and personnel required to develop the following communication tools for CREP and water quality project education and outreach: Sherman SWCD website, quarterly newsletter, programmatic and informational mailings, watershed council meetings, district meetings, conservation displays at public events, annual tree sale, and many others. These methods all encourage landowners to seek technical assistance through the Sherman County USDA Service Center.

Once landowners contact the office for technical assistance or program information, the nine-step planning process begins.

- Step 1 – Problems and opportunities are identified with the landowner
- Step 2 – Project objectives are determined for how to solve a given problem
- Step 3 – Existing resources are inventoried and documented
- Step 4 – Inventoried resources are analyzed and compared to area standards
- Step 5 – Formulate alternatives to current management activities
- Step 6 – Evaluate alternatives for applicability and feasibility
- Step 7 – Make decisions on which alternatives are to be implemented
- Step 8 – Implement plan
- Step 9 – Evaluate plan and revise if necessary

Enrolling producers in CREP is an involved process that utilizes the nine step planning process once the producer has officially signed up for the program. Outreach

via watershed council meetings, direct mailings, local planning processes, website promotion, demonstrations, and estimates of benefits are provided to both educate and interest producers in signing up for enrollment.

Once a CREP contract is established, practices such as the tree planting requirements, grass seeding, fencing, use exclusion, and off stream watering are implemented and cost share is provided through the USDA Farm Service Agency office. For three years after enrollment, projects must be annually monitored to assure that specifications for tree planting and other practices are being met. If landowners need additional cost share or technical assistance after implementation, they must request that assistance before the end of their three year window or else the fiscal and technical responsibilities fall upon that landowner.

RESULTS AND DISCUSSION

Implementation of this project has resulted in providing technical and implementation assistance for numerous on the ground projects, including over 50 WASCBs, several thousand feet of terraces, numerous spring developments, fencing, 5 implemented CREP contracts, and the development of 12 additional CREP projects slated for enrollment at the beginning of FY ’06. Within the past contract year in Sherman County, 355.4 acres of CREP have been enrolled protecting 19.3 miles of riparian habitat. In addition to the increase in on the ground projects, coordination and outreach to solicit conservation projects in Sherman County has increased due to the additional staffing provided by BPA funds. This project has been very successful in increasing the interest in conservation projects within Sherman County while adhering to the objectives set forth for this grant. As a result of the increased technical assistance provided by BPA, there has been an increase in the backlog of potential CREP projects as producers are signing up faster than projects can be processed.

Objectives for implementation of this project include the coordination of projects with other state and federal agencies. Coordination within watershed councils assures that local efforts are focused and not duplicated. Projects are brought from council meetings to the district which then coordinates the involvement of other agencies for implementation. SWCD employees are or have been involved in several planning processes to insure interagency communication. The watershed coordinator and technicians were involved in the Subbasin planning efforts in both the John Day and Deschutes Subbasins which brings numerous agencies together to identify Subbasin priorities. The Sherman SWCD is also the local management agency for the Lower John Day Ag Water Quality Planning Process. The Oregon Department of Forestry, Bureau of Land Management, and US Fish and Wildlife agencies have provided input on CREP planning and implementation for plans in Sherman County. These partnerships make planning efforts more efficient and eliminate the duplication of work.

Project coordination also involves applying for and securing funds to implement watershed improvement projects. Many federal and state agencies provide funding for projects that result in an environmental benefit. Funding and in kind services have been

applied for and received through the watershed coordinator position partially funded through this grant. Grant awards in the amount of $104,000 were received through input by the watershed councils, SWCD technicians, and watershed coordinator. These funds will be used to implement watershed improvement projects in Sherman County over the next 2-3 years. In addition another grant for $45,000 has been funded for the purpose of conducting a watershed assessment of Grass Valley Canyon. Another grant was recommended for funding in the amount of $73,000, but was not funded due to lack of state funding. That grant has been resubmitted for consideration in the next funding cycle.

Other objectives include providing technical assistance, and verifying the adherence of work performed to NRCS standards and specifications. These objectives are inherent in the planning methodology employed by the Sherman County SWCD and NRCS. Before cost share dollars are allocated by most funding agencies, a technician must measure a project versus nationally developed standards for the applied practices to ensure a quality finished product. Because the NRCS nine step planning process and NRCS Field Office Technical Guide (FOTG) are used in developing practices, the Sherman County SWCD is required, through a cooperative agreement with NRCS, to provide documentation of compliance with FOTG standards and NEPA, NHPA, CWA, ESA, and MSA requirements.

Three positions are funded, either in part or entirely, through this grant to accomplish the project objectives. Instead of directly translating dollar for dollar to on the ground projects, these positions leverage a much higher ratio of project dollars spent vs. BPA funds spent. The total dollar amount leveraged for watershed improvement and CREP projects was in excess of $260,000 compared to $64,000 in BPA dollars spent.

With the increased personnel support provided in part by this grant, the Sherman County SWCD and watershed councils were able to address a growing backlog of conservation projects. However, there is still a large demand for technical and financial assistance for watershed improvement. With the office staff at full strength, on the ground projects are being implemented and new projects are being developed.

Another important aspect of protecting watersheds and riparian areas is educating landowners about watershed and stream health and providing them solutions to resource concerns on their land. In the matter of riparian issues, we heavily market the benefits of the CREP and CCRP programs both environmentally and economically. These projects are promoted at all meetings through examples of successful projects, cost benefit estimates, flyers, or informational literature on how programs work to improve watershed health and function. Much of this outreach is provided through the personnel support provided in this grant. Continued outreach and education will increase demand for CREP and water quality projects in the coming year.

With all of the state and federal guidelines including NEPA and ESA requirements, in addition to computer, engineering and planning requirements, the learning curve has been steep. The continuity in personnel from this grant has allowed

the necessary training to take place and the results will be seen through increased conservation activity in the next contract period.

SUMMARY AND CONCLUSIONS

This project has been very successful in addressing the growing demand for conservation projects in Sherman County. Successful projects implemented through the technical assistance and outreach provided through BPA funds have increased local demand and awareness for conservation cost share. As a result, there is an abundance of potential conservation projects for water quality and riparian management improvement. With the sustained availability of coordination and technical assistance provided through this grant, projects will continue to be implemented and BPA personnel funds will translate to a much higher dollar figure applied on the ground.

SUMMARY OF ACCOMPLISHMENTS

- 355.4 acres of CREP enrolled protecting 19.3 miles of riparian habitat
- Provided input in both the John Day and Deschutes Subbasin Plans and attended nearly all meetings of the coordination groups
- Developed 2 irrigation systems for CREP tree establishment
- Implemented over 30 water quality improvement projects resulting in the installation of over 50 WASCBs, several thousand feet of terraces, fencing, brush clearing, and water developments
- Maintained NRCS Resource Management System certification for use in developing conservation plans
- Provided ArcView GIS training for all office personnel for map calculations and map creation
- Maintained Sherman County SWCD website for conservation outreach to producers on available resources
- Produced hundreds of high quality maps for use in plan development and implementation
- Participated in the Oregon Department of Agriculture's Ag Water Quality Management Area Planning process for developing local water quality rules in compliance with Senate Bill 1010
- Conducted status reviews for buffers enrolled in CREP to determine progress in plan implementation
- Wrote 4 grants for watershed scale water quality projects, 2 of which were funded, 1 of which is pending, and 1 of which was recommended for funding but not funded due to a shortage of funds
- Wrote grant for Watershed Assessment of Grass Valley Canyon which has been funded
- Participated in the completion of Subbasin Plans in both the Lower John Day and Lower Deschutes Subbasins
- Submitted and were approved for 10 OWEB Small Grants for small scale projects in both the John Day and Deschutes watersheds

- Published and circulated Sherman County SWCD newsletter on a quarterly basis to promote existing conservation and encourage future projects
- Conducted 4 watershed council meetings with local interests to gain feedback from existing conservation projects and to plan for future projects
- Provided administrative and NEPA support for BPA contract 1999-010-00 for habitat improvements in the Pine Hollow Watershed

SUMMARY OF EXPENDITURES

Personnel Salaries	$ 44,322
OPE	$ 9,888
Travel	$ 799
Materials & Services	$ 3,115
Administrative Overhead	$ 5,853
TOTAL EXPENDITURES	**$ 63,977**